

## REMARKS/ARGUMENTS

In the Office Action mailed August 29, 2008, claims 1-15, 17, 18, 20, and 21 were rejected. Additionally, claim 16 was objected to, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Applicant hereby requests reconsideration of the application in view of the below-provided remarks. No claims are added or canceled.

For reference, claim 1 is amended to clarify in which stages the search dependent and search independent processing takes place. This amendment is supported, for example, by the subject matter described at paragraph 23 of the present application.

### Claim Rejections under 35 U.S.C. 103

Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Key et al. (U.S. Pat. No. 6,272,621, hereinafter Key) in view of Rhoades et al. (U.S. Pat. Pub. No. 2003/0041163, hereinafter Rhoades). Additionally, claims 1-3 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoades in view of Van Lunteren et al. (U.S. Pat. No. 7,193,997, hereinafter Van Lunteren). Additionally, claims 6, 7, 14, and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Key in view of Rhoades and Van Lunteren. Additionally, claims 13, 17, 18, 20, and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Key in view of Rhoades and Kaganoi et al. (U.S. Pat. Pub. No. 2003/0012198, hereinafter Kaganoi). Additionally, claims 4 and 5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoades modified by Van Lunteren and further in view of Khanna (U.S. Pat. No. 7,219,187, hereinafter Khanna). Additionally, claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Key modified by Rhoades and Van Lunteren and further in view of Khanna. Additionally, claims 8 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Key modified by Rhoades and Van Lunteren and further in view of Kaganoi. However, Applicant respectfully submits that these claims are patentable over Key, Rhoades, Van Lunteren, Kaganoi, and Khanna for the reasons provided below.

### Independent Claim 12

Claim 12 recites “wherein the first and second stage processing elements are configured to allow the second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit, where the search is related to the same packet” (emphasis added). The rejection of claim 12 is improper for at least two reasons. First, the rejection of claim 12 is improper because the Office Action does not establish a *prima facie* rejection for claim 12. Second, the combination of cited references does not teach all of the limitations of the claim.

1. The Office Action does not establish a *prima facie* rejection of claim 12 because the Office Action does not address the actual language of the claim.

In order to establish a *prima facie* rejection of a claim under 35 U.S.C. 103, the Office Action must present a clear articulation of the reason why the claimed invention would have been obvious. MPEP 2142 (citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_ (2007)). Here, the Office Action fails to explain why the claimed limitations of claim 12 would have been obvious because the Office Action does not explicitly assert that the cited references might teach all of the limitations of claim 12.

In particular, the Office Action fails to explicitly assert that the cited references might teach “wherein the first and second stage processing elements are configured to allow the second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit, where the search is related to the same packet” (emphasis added), as recited in claim 12. The Office Action recognizes that Key does not teach the indicated limitation. However, the Office Action does not make an explicit assertion that Rhoades might teach the indicated limitation, or that the indicated limitation might otherwise be obvious in light of the cited references. It appears that this oversight in the Office Action may be a result of relying on Rhoades to describe parallel processing, generally, and perhaps concluding, without actually stating, that the indicated parallel processing is the same process as cited in the claim. Nevertheless, the rejection of claim 12 does not fully address the specific

language of claim 12 because the Office Action does not provide any specific reasoning to explain how the parallel processing of Rhoades might relate to the indicated limitation of the claim.

Therefore, the Office Action fails to establish a *prima facie* rejection for claim 12 because the Office Action does not explicitly assert or show how the cited references might teach the actual limitations of the claim. In particular, the Office Action does not assert that Rhoades might teach first and second elements allow the second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit, which is not taught by Key. Accordingly, Applicant respectfully requests that the rejection of claim 12 under 35 U.S.C. 103(a) be withdrawn because the Office Action fails to establish a *prima facie* rejection.

2. The combination of Key and Rhoades does not teach all of the limitations of claim 12 because Rhoades does not teach a second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit using the same packet.

The combination of Key and Rhoades does not teach a second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit using the same packet, as recited in the claim. As noted above, the Office Action acknowledges that Key does not teach the indicated limitation. Hence, the Office Action appears to rely on Rhoades as teaching the indicated limitation, even though the Office Action does not explicitly assert that Rhoades might teach the indicated limitation.

Rhoades does not teach a second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit using the same packet, as recited in the claim. For a proper understanding of the context of the claim, it should also be noted that the first and second stage processing elements are part of an array of processing elements. In contrast, Rhoades merely describes processor threads that overlap operations in a single processor. In particular, Rhoades states that Fig. 8 illustrates the overlap between packet processing

and table lookup for a single processor. Rhoades, paragraph 349. Hence, even though Rhoades might describe a system with multiple processors, the description relied on in the Office Action merely describes the functionality of a single processor. Since the Office Action does not attempt to explain how the single processor of Rhoades might be considered to be both first and second stage processing elements within an array of processing elements, the description in Rhoades of a single processor is insufficient to describe both first and second stage processing elements. Hence, Rhoades also fails to describe first and second stage processing elements, in which the first stage processing element searches the first stage memory unit and the second stage processing element to perform search-independent processing related to a packet in parallel with the search of the first stage memory unit. Therefore, Rhoades does not teach a second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit using the same packet, as recited in the claim.

For the reasons presented above, the combination of Key and Rhoades does not teach all of the limitations of the claim because Rhoades does not teach a second stage processing element to perform search-independent processing related to a packet in parallel with a search of the first stage memory unit using the same packet, as recited in the claim. Accordingly, Applicant respectfully asserts claim 12 is patentable over the combination of Key and Rhoades because the combination of Key and Rhoades does not teach all of the limitations of the claim.

#### Independent Claim 1

Applicant respectfully asserts independent claim 1 is patentable over the combination of Rhoades and Van Lunteren at least for similar reasons to those stated above in regard to the rejection of independent claim 12, since the Office Action relies on the same purported teachings of Rhoades. In particular, claim 1 recites “performing, in parallel with the first search, search-independent processing using a second stage processing element on information related to the packet” (emphasis added).

Here, although the language of claim 1 differs from the language of claim 12, and the scope of claim 1 should be interpreted independently of claim 12, Applicant respectfully asserts that the remarks provided above in regard to the rejection of claim 12

also apply to the rejection of claim 1. Accordingly, Applicant respectfully asserts claim 1 is patentable over the combination of Rhoades and Van Lunteren because Rhoades does not teach performing search-independent processing using a second stage processing element in parallel with a first search, as recited in the claim.

#### Independent Claim 6

Applicant respectfully asserts independent claim 6 is patentable over the combination of Key, Rhoades, and Van Lunteren at least for similar reasons to those stated above in regard to the rejection of independent claim 12, since the Office Action relies on the same purported teachings of Rhoades. In particular, claim 6 recites “performing, in parallel with the search of the first stage memory unit, search-independent processing on information related to the packet using a second stage processing element, wherein the second stage processing element is included within the array of processing elements” (emphasis added).

Here, although the language of claim 6 differs from the language of claim 12, and the scope of claim 6 should be interpreted independently of claim 12, Applicant respectfully asserts that the remarks provided above in regard to the rejection of claim 12 also apply to the rejection of claim 6. Accordingly, Applicant respectfully asserts claim 6 is patentable over the combination of Key, Rhoades, and Van Lunteren because Rhoades does not teach performing search-independent processing on information related to a packet using a second stage processing element in parallel with a search of the first stage memory unit, as recited in the claim.

#### Independent Claim 18

Applicant respectfully asserts independent claim 18 is patentable over the combination of Key, Rhoades, and Kaganoi at least for similar reasons to those stated above in regard to the rejection of independent claim 12, since the Office Action relies on the same purported teachings of Rhoades. Claim 18 recites “the first and second stage processing elements are configured to allow the second stage processing elements to perform search-independent processing related to respective packets in parallel with

searches of the first stage memory unit, where the searches are related to the same packets” (emphasis added).

Here, although the language of claim 18 differs from the language of claim 12, and the scope of claim 18 should be interpreted independently of claim 12, Applicant respectfully asserts that the remarks provided above in regard to the rejection of claim 12 also apply to the rejection of claim 18. Accordingly, Applicant respectfully asserts claim 18 is patentable over the combination of Key, Rhoades, and Kaganoi because Rhoades does not teach allowing the second stage processing elements to perform search-independent processing related to respective packets in parallel with searches of the first stage memory unit, as recited in the claim.

#### Dependent Claims

Claims 2-5, 7-11, 13-17, and 20-21 depend from and incorporate all of the limitations of the corresponding independent claims 1, 6, 12, and 18. Applicant respectfully asserts claims 2-5, 7-11, 13-17, and 20-21 are allowable based on allowable base claims. Additionally, each of claims 2-5, 7-11, 13-17, and 20-21 may be allowable for further reasons.

## CONCLUSION

Applicant respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited.

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-3444** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-3444** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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